

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions, and listings, of claims in the captioned patent application:

Listing of Claims:

1-52. (Cancelled)

53. (New) A metal-air battery comprising:

first and second cathodes;

first and second positive contacts electrically connected to the first and second cathodes, respectively;

an anode;

first and second separators disposed between the anode and the first and second cathodes, respectively; and

a negative contact electrically connected to the anode and electrically insulated from the positive contacts, wherein the positive and negative contacts form at least a substantial portion of a casing of the battery, and wherein the casing is configured to allow air into the battery for reduction at the first and second cathodes.

54. (New) The battery of claim 53, wherein the battery is a button battery.

55. (New) The battery of claim 53, wherein the anode comprises zinc.

56. (New) The battery of claim 55, wherein the anode comprises a gelled mixture of zinc powder and potassium hydroxide (KOH) electrolyte.

57. (New) The battery of claim 53, wherein the negative contact forms at least a substantial portion of a lid of the casing, the first positive contact forms at least a substantial portion of a can of the casing, and side portions of the negative contact are disposed within the can.

58. (New) The battery of claim 53, wherein the first positive contact comprises at least one aperture configured to allow air into the battery to provide oxygen for reduction at the first cathode, and the negative contact comprises at least one aperture configured to allow air into the battery to provide oxygen for reduction at the second cathode.

59. (New) The battery of claim 58, further comprising:

a first air distribution membrane disposed across the at least one aperture of the first positive contact and within the casing; and

a second air distribution membrane disposed across the at least one aperture of the negative contact and within the casing.

60. (New) The battery of claim 53, wherein the second positive contact is disposed within the battery casing and electrically connects the first and second cathodes, and wherein the second positive contact is electrically insulated from the anode and the negative contact.

61. (New) The battery of claim 53, wherein the negative contact forms a substantially cylindrical portion of the casing, and wherein the first and second positive contacts form first and second lids of the casing disposed proximate first and second ends of the substantially cylindrical portion, respectively.

62. (New) The battery of claim 61, wherein the first positive contact comprises at least one aperture configured to allow air into the battery to provide oxygen for reduction at the first cathode, and the second positive contact comprises at least one aperture configured to allow air into the battery to provide oxygen for reduction at the second cathode.

63. (New) The battery of claim 53, further comprising adhesive tabs configured to seal the battery casing.

64. (New) The battery of claim 53, wherein the first and second separators are configured to prevent migration of solid particles between the anode and the first and second cathodes, respectively.

65. (New) A metal-air battery comprising:

first and second cathodes;

first and second positive contacts electrically connected to the first and second cathodes, respectively;

an anode;

first and second separators disposed between the anode and the first and second cathodes, respectively; and

a negative contact electrically connected to the anode, wherein the positive and negative contacts, together with an insulating gasket, form at least a substantial portion of a casing of the battery, and wherein the casing is configured to allow air into the battery to provide oxygen for reduction at the first and second cathodes.

66. (New) The battery of claim 65, wherein the battery is a button battery.

67. (New) The battery of claim 65, wherein the anode comprises zinc.

68. (New) The battery of claim 67, wherein the anode comprises a gelled mixture of zinc powder and potassium hydroxide (KOH) electrolyte.

69. (New) The battery of claim 65, wherein the negative contact forms at least a substantial portion of a lid of the casing, the first positive contact forms at least a substantial portion of a can of the casing, side portions of the negative contact are disposed within the can, and the first positive contact is electrically insulated from the negative contact by the insulating gasket.

70. (New) The battery of claim 65, wherein the first positive contact comprises at least one aperture configured to allow air into the battery to provide oxygen for reduction at the first cathode, and the negative contact comprises at least one aperture configured to allow air into the battery to provide oxygen for reduction at the second cathode.

71. (New) The battery of claim 70, further comprising:

a first air distribution membrane disposed across the at least one aperture of the first positive contact and within the casing; and

a second air distribution membrane disposed across the at least one aperture of the negative contact and within the casing.

72. (New) The battery of claim 65, wherein the second positive contact is disposed within the battery casing and electrically connects the first and second cathodes, and wherein the second positive contact is electrically insulated from the anode and the negative contact.

73. (New) The battery of claim 65, wherein the negative contact forms a substantially cylindrical portion of the casing, and wherein the first and second positive contacts form first and second lids of the casing disposed proximate first and second ends of the substantially cylindrical portion, respectively.

74. (New) The battery of claim 73, wherein the first positive contact comprises at least one aperture configured to allow air into the battery to provide oxygen for reduction at the first cathode, and the second positive contact comprises at least one aperture configured to allow air into the battery to provide oxygen for reduction at the second cathode.

75. (New) The battery of claim 65, further comprising adhesive tabs configured to seal the battery casing.

76. (New) The battery of claim 65, wherein the first and second separators are configured to prevent migration of solid particles between the anode and the first and second cathodes, respectively.

77. (New) A metal-air battery comprising:

first and second cathodes;

first and second positive contacts electrically connected to the first and second cathodes, respectively;

an anode;

first and second separators disposed between the anode and the first and second cathodes, respectively;

a negative contact electrically connected to the anode and comprising at least one aperture configured to allow air into the battery to provide oxygen for reduction at the second cathode; and

a casing comprising at least a portion of the negative contact and configured to allow air into the battery to provide oxygen for reduction at the first cathode.

78. (New) The battery of claim 77, wherein the battery is a button battery.

79. (New) The battery of claim 77, wherein the anode comprises zinc.

80. (New) The battery of claim 77, wherein the negative contact forms at least a substantial portion of a lid of the casing, the first positive contact forms at least a substantial portion of a can of the casing, and side portions of the negative contact are disposed within the can.

81. (New) The battery of claim 77, wherein the first positive contact comprises at least one aperture configured to allow air into the battery to provide oxygen for reduction at the first cathode, and the negative contact comprises at least one aperture configured to allow air into the battery to provide oxygen for reduction at the second cathode.

82. (New) The battery of claim 81, further comprising:

a first air distribution membrane disposed across the at least one aperture of the first positive contact and within the casing; and

a second air distribution membrane disposed across the at least one aperture of the negative contact and within the casing.

83. (New) The battery of claim 77, wherein the second positive contact is disposed within the battery casing and electrically connects the first and second cathodes, and wherein the second positive contact is electrically insulated from the anode and the negative contact.

84. (New) The battery of claim 77, further comprising adhesive tabs configured to seal the battery casing.

85. (New) The battery of claim 77, wherein the first and second separators are configured to prevent migration of solid particles between the anode and the first and second cathodes, respectively.